JARLTECH
MAIN CATALOGUE
AT#3

DATALOGIC™
MOTOROLA PartnerSelect
Honeywell
Getac
METAPACE
EPSON EXCEED YOUR VISION
CITIZEN Micro HumanTech
star MICRONICS
Zebra
GLANCETRON
Colormetrics
elo TOUCHSYSTEMS
TE connectivity TOUCH SOLUTIONS
hp
NCR
Panasonic ideas for life
PrehKeyTec
Addimat Votre partenaire au buffet
SCM MICROSYSTEMS
PROMAG™
Mogler
CASH BASES
ratiotec

For Resellers only

YOUR ONE-STOP SOURCE

Datalogic

- Gryphon Healthcare: New bar code reader line specialised for healthcare
- Gryphon I GBT4400: Brand new Bluetooth area imager
- Falcon X3: The new state-of-the-art mobile terminal
- Magellan 3300HSI: The first Magellan in-counter imager for 1D and 2D bar codes

Honeywell

- Voyager 1200g: The brand new version of the global top-selling laser scanner
- Hyperion 1300g: High performance linear imager with top ergonomics
- Xenon 1900 HC: Healthcare version of the powerful handheld scanner for 2D bar codes

Motorola

- DS4208: High-end imager - also reads 2D bar codes from cell phones
- DS9208: Newest generation presentation imager

NEW IN THIS ISSUE

Star
- Star TSP100: The series is now complete, featuring ECO tools for considerable savings
- Always by your side: Star's new mobile printers for numerous applications

Epson
- TM-H6000IV: Highly flexible multi-station receipt printer for bills and receipts
- TM-L500: Miniature all-rounder for ticket printing

Citizen
- CL-S Series: Facelift of the renowned desktop receipt printers CL-P521, CL-P621 and CL-P631
- CT-S 310II: Newest version of the entry-level thermal printer

Metapace
- T-3: Fast thermal receipt printer at a favourable price! Functionally-designed with included accessory package

Colormetrics
- Even more powerful: Hardware upgrade for the exclusive POS systems

Elo
- Elo 2242L: First multi-touch built-in monitor for new, interactive applications
- Elo 2400LM: Desktop touchmonitor with 61 cm (24'') widescreen format
- Elo Medicals: Certified monitors for sensitive applications

Glancetron
- New edition of the successful complete systems 8802 and 8805: Now with Intel i5 processors
- GTmulti: Innovative multi-touch technology for unprecedented flexibility packaged in a sleek design
- 8038/8039: Customer displays in timeless stainless steel design
- Displays: Stylish change tray with integrated monitor or 7-inch stand display

PrehKeyTec
- HospiTouch: Elegant keyboard in black or white with glass surface for high requirements

ratiotec
- Soldi Smart: Compact bank note testing device – ideal for narrow checkouts

NEW MANUFACTURERS

Getac
- PS535F: The worldwide smallest fully rugged handheld terminal
- Fully rugged notebooks: Uncompromising performance in a robust design for any application
- E100: High-end tablet PC especially for field staff

NEW!

NCR
- RealPos Series: Compact POS PCs and complete systems from NCR
- Brand new: Compact all-in-one system in modern design
- Extensive offer of peripheral devices for the demanding POS area
- NCR On-site service: 3-Year all-around and worry-free

HP
- ap5000: High-end all-in-one POS system
- rp5700: Modular PC system for checkout and back office usage
- Scanner, display, monitor, etc.: Brand name peripheral devices individually integrated
- HP On-site service: Individual packages – safety and protection tied up nicely

JARLTECH Update

»Jarltech Update« – the name says it all!

With our print medium, we keep you up-to-date on market and product news, interesting case studies and current promotional activities.

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PROMAG™
Mogler
CASH BASES
ratiotec

SPLASH
SOME
COLOUR
ON YOUR
POS

Colormetrics

The Exclusive POS System P1000 from Colormetrics

WELCOME

Dear Jarltech Partner!

Tauris and its sister company, Jarltech, are combining forces to improve capacity in the future: effective immediately, Tauris Austria will go by the company name Jarltech. For, you this means a unified market presence, faster and improved service, as well as pricing from a leading European high-volume distributor. The performance, products and services you are accustomed to will remain the same. However, we are pleased to now also be able to offer you devices from HP, NCR and Getac.

With Hewlett Packard, you are offering your customers a top IT brand that is known for its production of outstanding POS systems and long life cycle POS PCs. NCR is one of the oldest POS manufacturers in the world – with the most modern book-sized PCs and touch screen POS options – a brand your customers can rely on. Both of these manufacturers' hardware is available with European-wide on-site service, for additional security! Getac produces extremely robust laptops, tablet PCs and mobile terminals, for the most challenging outdoor environments. Whether in construction, field service or the sciences - here you will find the hardware that your customers have been searching for in vain, up to now!

In addition to high-quality brands and reliable hardware, you as a reseller, integrator, system house or E-tailer will find everything at Jarltech Austria that you need to make your workflow more efficient: rely on overnight delivery with 98% stock availability, professional marketing support and EDI and XML feeds. You will enjoy individual price and availability requests on the internet, simple one-click service contracts, and even a bonus shop, to name only a few of the advantages of ordering with Jarltech. You will find additional interesting information on these topics on the following pages.

Visit our website today at **www.jarltech.at** and in addition to finding comprehensive market information, you will also find our current special offers and sales, guaranteed to generate more sales for you. You will receive your individual login data from your customer service representative – call now!

With kind regards,

Ulrich Spranger (General Manager)
ulrich.spranger@jarltech.at

PS: Are you looking for more margin and less pressure from the competition when it comes to reliable brand name hardware? Your customers will not readily find the high performance Metapace and Glancetron products on the internet. Order your demo devices today and be amazed at their quality!

YOUR BIGGEST ADVANTAGES AT JARLTECH

1. EXPEDITIOUS

Tailored to your needs

We ship 98% of incoming orders immediately from stock.

We dispatch orders placed by 17:30 on the same day – at no extra charge!

We permanently have more than 10,000 products at your disposal.

We have exotic variants and colours of all devices available immediately from stock.

Being a great partner of DPD, we are particularly flexible.

2. AFFORDABLE

More profit for you

Our size ensures you the best conditions at all times.

You comfortably pay for goods on account with a payment term.

We offer a payment term of up to 90 days for an extra charge.

Higher margins for you through our own purchasing offices in the Far East.

With each purchase, we give you bonus points for great awards.

3. CONVENIENT

Perfect service

Borrow demo devices for testing and presentations, free of charge.

Direct delivery to your customers with your own delivery note if desired.

Order service contracts or warranty extensions with only one click.

We do not sell to end customers! We are always your partner, never your competitor.

Get free technical support by phone – (+43-1) 485 26 05 0

4. COMPLETE

One-stop shop

We are personally available to assist you from 8:00 until 18:30.

Availability of and prices for all products on the Internet around the clock.

Online, you will find data sheets, specifications and videos on products.

Claim processing and warranty check are a couple clicks away online.

Our support database on the Web answers urgent questions immediately.

Support – at a glance:

Free support hotline for all resellers
Call (+43-1) 485 26 05 0 or contact us by e-mail

Manufacturer-trained technical personnel
Professional first-hand knowledge

Certified Epson Service Center
Overnight servicing for all warranty claims

Extensive support database (free)
All drivers, manuals, FAQs, etc. are online

Spare part service: all from stock
For Epson, Zebra, Datalogic and many other manufacturers

Epson Service Center

Configuration – at a glance:

PC configuration
We install the operating system in any desired language

Software installation
At the same time, we install your software using your hard disk image

Hardware configuration
We configure DIP switches and settings according to your specifications

Product individualisation
Custom labels, adding special user instructions, etc.

Functionality and burn-in test
On request, we also test your hardware before shipping

Competence in
SUPPORT & MAINTENANCE

Technical support: Technical support from Jarltech at **(+43-1) 485 26 05 0** is free of charge for software companies and system integrators. Regular training courses and programmes from our manufacturers ensure that our service personnel is informed about the latest developments and changes. We will gladly assist you with any problems regarding hardware integration and installation. We also provide an extensive support database on our website **www.jarltech.at** with all documents, drivers, manuals and extra tips for all devices.

Repairs & warranty claims: All incoming warranty claims are processed on the same day. If we can locate the defect on our own, we repair your goods immediately or send them back to the manufacturer. As a certified Epson Service Center, we are able to perform warranty repairs directly. This means that we are faster and more efficient than distributors who have to send defective devices to the manufacturer.

Spare part service: We can deliver several hundreds of thousands of spare parts from various manufacturers. For example, we are an official spare part supplier for Epson POS printers, Zebra label printers and Datalogic bar code scanners. Our internet support section contains exploded views for many products that can help you to easily identify (and order) modules, worn parts, even single screws and other small parts.

Configuration and
INSTALLATION SERVICES

With Jarltech, large projects must not automatically lead to stress during system installation. On request, we will install and configure systems, PCs and single devices according to your wishes before shipping. This can be the installation of your own images, installation of POS software onto a touch screen system, re-labelling of devices (like receipt printers or scanners) with your own labels, configuration of Windows CE on handheld devices or simply the installation of Windows on a PC. Then, we send them to you or directly to your customer. Your technicians do not have to spend hours on configuration anymore – all they have to do is to place and fix the hardware to their desired location. Especially with large orders, our reasonable installation service can save you enormous amounts of time and personnel expenses.

Furthermore, you and your customers gain additional assurance that the acquired system does indeed work as desired, as we examine all hardware components thoroughly during configuration for possible defects and damage. Defective devices are combed out immediately. We will gladly provide you with more information on how we can increase your efficiency – simply contact your Jarltech representative in our sales department!

Bonus awards – at a glance:

Collect bonus points for every euro of sales
Free awards for all Jarltech resellers

Large bonus shop with fantastic awards
More than 1,200 bonus awards, from CDs to air tickets

For the company owner, purchaser and colleagues
Jarltech pays all income taxes for bonus awards in advance

Automatic points on all sales
For all registered participants

Save points for larger awards
Your points never expire as long as you buy regularly

Jarltech VIP – at a glance:

Collect points and become a Jarltech VIP
20,000 points for Silver VIP status, 50,000 for Gold VIP

Free delivery
For Silver VIPs at 1,000 euros order value upwards and for Gold VIPs at 600 euros

Exceptionally low prices
Separate pricing, always extremely favourable

Privileged deliveries
For Gold and Silver VIPs

Free technician courses
For Gold and Silver VIPs – custom-tailored to your requirements

15% rebate
On express and Saturday shipping service

For You and Your Company –

BONUS AWARDS

Participants of our Jarltech bonus system automatically receive points for every euro of sales, which can be exchanged in our bonus shop for attractive awards. Apply for the bonus system online at **www.jarltech.at** – it only takes a minute. Later, your point balance can be found online in your bonus account in the Jarltech bonus shop. All points in your account are valid for twelve months from your last purchase.

Our bonus shop works like any other online shop; the only difference is that you spend bonus points instead of money. We deliver your awards free of charge to any address in our sales area. The contents of our bonus shop change constantly – so do not hesitate, and make your decisions quickly. Naturally, we are interested in providing awards that are as attractive as possible – if you have any special wishes, please contact us. In order to be able to provide this service without additional costs, we gladly process your requests via email at **bonus@jarltech.com.**

Jarltech pays all the taxes for your awards on your behalf. This means you will not have to book the bonus awards as revenue. Jarltech customers with invoice and delivery addresses in Austria, Belgium, Denmark, France, Germany, Luxembourg, the Netherlands, Poland, Spain, Sweden, Switzerland and the UK are eligible for participation. Each customer, which must be a firm, can have only one bonus account. Awarded bonus points are not transferable and cannot be cashed in.

Exclusive Advantages as a

JARLTECH VIP

Gain your Jarltech VIP status with bonus points: 20,000 points a year are necessary to reach the Silver VIP status, and with 50,000 points, you enjoy extra benefits as a Gold VIP.

Your Silver VIP advantages: Once you become a Silver VIP, you will automatically receive a welcome gift of 2,000 bonus points. You not only receive free delivery in Poland of purchased goods worth more than 1,000 euros (except express and Saturday shipping), but you will also be eligible for special promotions (kits, bundles, special offers) and extra bonus point opportunities. Additionally, you benefit from a dead-on-arrival service as well as free technical training courses for you and your colleagues.

Your Gold VIP advantages: Needless to say that Gold VIPs receive the same advantages as Silver VIPs. However, upon attaining Gold status for the first time, you receive 5,000 welcome points. Furthermore, free deliveries (except express and Saturday shipping) are already available from 600 euros upwards and you also receive 25 percent more bonus points than average members do for shopping.

Of course, you will also enter a different pricing group. Both Gold and Silver VIPs get a separate VIP price list with extra low prices. Additionally, we offer VIPs a 15% rebate on express and Saturday shipping.

Service contracts – at a glance:

Extended Warranty:

More safety for you and your customers
Three full years warranty period for each product

Easy process
No forms – merely a nine percent extra charge

For all products of all manufacturers
Independent of manufacturer warranties

Pre-Exchange Service:

Instant service for failures within the warranty period
Defective products are replaced instantly with new ones

Order it too while shopping
Only eight percent extra charge

Also available as combined service
Pre-Exchange Service + Extended Warranty

NOW AS ONE-CLICK SERVICE

Full Cover – at a glance:

Three years perfect security for your customer
The Full Cover Warranty covers all hardware damage – even damage that is usually not covered by the manufacturer warranty

Extends warranty to three years
Warranty coverage for all hardware is extended to three years

Perfect planning security for your customer
No unexpected repair costs or invoices

For all products of all manufacturers
Regardless of the original manufacturer warranty

Available at 18 percent surcharge!
Easy to order – simply add a Full Cover Warranty to your order over the telephone or via Internet

Safety without Stress

ONE-CLICK SERVICE CONTRACTS

Simply buy the security that your customers need for only a few euros extra! Our one-click service contracts can be ordered online with a single click or conveniently over the phone. The service can cover any device of your choice – forms and applications are not necessary. Simply add the service options of your choosing when you order:

Extended Warranty: Merely nine percent extra and you can acquire almost all of our products with a full three-year manufacturer-independent warranty. Advance Replacement Service and Extended Warranty can be combined freely.

Pre-Exchange Service: If a device with Pre-Exchange Service contract fails during the warranty period, we will send you or your customer a replacement immediately. Then, you simply send back the defective device within the next ten days. You keep the replacement device and do not need to exchange it again. A single payment of merely eight percent of the original price is necessary to purchase this service. The service is valid for the entire warranty period, even for extended warranties.

Always on the Safe Side

FULL COVER WARRANTY

Jarltech gives you the opportunity to offer your customers excellent services for protection against defects that are not covered by the manufacturer's warranty. Regardless if the cause is carelessness, exceptional stress, negligence or untrained personnel, with our Full Cover Warranty, expensive servicing or unexpected maintenance costs for new hardware are a thing of the past. At an extra cost of 18 percent, you receive an all-inclusive service package »Made by Jarltech«. If a device fails during the first three years after purchase, whatever the cause, we repair it or replace it with an equivalent device. Forms and time-consuming quotations are not required.

The advantage for your customer is obvious: even though it includes a higher initial cost, during the entire warranty period, unexpected costs from hardware defects no longer arise. Over the long term, the investment is safe and the customer can rest assured, as defect hardware is always replaced.

The Jarltech Full Cover Warranty is available for all products priced 150 euros and above. All wearing parts such as consumables or print heads, etc. are excluded from the warranty. However, all damage that was not caused by vandalism, fire or deliberate destruction, is covered by this warranty. Included in the package is a Warranty Extension to three years and coverage of damages that are not covered by the original warranty.

Demo units – at a glance:

Test any product before purchasing!
The demo hardware service is free of charge

For direct presentations to your customers
Convince with concrete arguments

Easy software adjustments
Use it as reference hardware for your programmers

10 days for free trial
Contact your representative for more information

Large choice and short waiting times
Almost every product in the catalogue is available without delay

Marketing – at a glance:

Shipping with your bill of delivery
Send us your layout and direct deliveries will carry your corporate design

Customised and neutral catalogues available
Our latest catalogue with all products, but without any reference to Jarltech, or with your selected content

E-mailing service
Our online tool helps you create professional e-mailings in a few steps

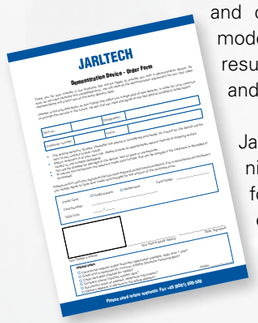
Event and seminar support
Event support from Jarltech and our manufacturers

Product videos
Demonstrative product videos are available in our online library

Free-of-charge and without commitment

DEMO UNITS FOR PRESENTATIONS

Convince your customers with product features and on-site presentations! Only hardware presentations are really convincing – brochures and multi-coloured pictures only give a nice but not lasting effect. Systems that can be touched and tested directly give customers a totally different impression, and comparing the features of different models and brands is made easier. As a result, customers make better decisions and are more confident.


JARLTECH
Demonstration Device - Order Form

Jarltech offers you the unique opportunity to use our demonstration hardware for ten days' testing with no further obligations. Almost any product in this catalogue is available as demo hardware in one or more variants. Simply choose the required product from our large demo pool, and you will receive it free of charge and with no further obligations for testing. Naturally, you can also use them to adjust software configurations or develop your own drivers and applications.

All demo hardware is available for short-term immediate delivery without complicated applications. Please consider that some devices require a waiting time. If you need our demo hardware, simply contact your Jarltech representative for more information, or to choose a suitable version for your application and to arrange a delivery date.

Convincing competence

MARKETING SERVICES

With many marketing services, we provide you with more opportunities to sell your solutions – all free of charge or at cost price. Our extensive experience in the production of advertising material and POS and auto-ID marketing is a guarantee for professional and effective results.

As a Jarltech customer, you are used to having your ordered goods delivered quickly and without complication directly to your customers if you wish. On demand, all bills of delivery of goods shipped to your customers through us will carry **your layout!** Ordered today, delivered tomorrow – take advantage of this service and send us your design for bills of delivery and invoices.

Furthermore, all re-sellers receive a neutral PDF version of our latest catalogue without the Jarltech logo – of course free of charge. Presentations of our products are now possible in full context with all product descriptions, yet without a trace of Jarltech. Alternatively, we design **your very own catalogue** based on the Jarltech catalogue – custom-tailored to your system solutions, with PDFs, print layouts, even with printing and packaging.

Additionally, we offer you our handy **e-mailing tool** that helps you copy and paste our texts and images into your own emails, which you send in batches to your focus group with the press of a button.

PROMAG™

SmaFinger

fingerprint and contactless smartcard reader

PROMAG™

Everyone is talking about the advantages that come with RFID and transponder technology. Time and attendance control as well as access control are perfect applications for this kind of proximity data capture. Jarltech offers now various Promag RF transponder devices for professional applications. Jartlech is exclusive distributor in Germany for Promag RFID hardware.

Promag is the leading Taiwanese manufacturer of RFID technology and auto-ID hardware. Promag can offer an incredibly wide range of devices ready for various applications and areas at outstanding hardware quality. The implementation of Total Quality Management (TQM) at Promag makes defects extremely rare and improves the durability of their products significantly compared to many rival products.

Jarltech has included a large selection of Promag time and attendance as well as access control products in various versions. This includes simple door locks, fixed-installation time clock terminals and even portable RFID tag readers for security surveillance in industrial manufacturing sites or other security applications. All devices are usually available from stock and delivered within 24 hours.

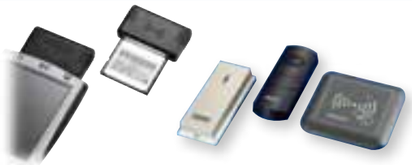
With Jarltech you offer your customers our extended services – as with all products you can extend the warranty for Promag products with an optional Advance Replacement Service. If one of the devices fails within the warranty period, we will replace it immediately – your customer only sends back the original device after receiving our replacement.

Not only contactless data reading and writing is an RFID advantage – you have an enormous selection of tags at your disposal: they are available as writable or read-only versions in various shapes, such as cards, chips or key-ring pendants – even screwed onto objects or walls. In order to make the adaptation to this new system easier, many Promag devices optionally include readers for magnetic and smart cards or bar codes.

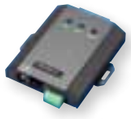
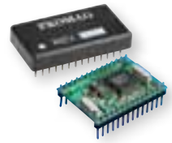
PROMAG™

Promag Product Overview

RFID



RFID

Model	PCR-942	GPW-100/PRW-106/PCR-340	PCR-300 / 310	RWD-145	GP-/LBR-Serie	MF700 / MF7	GP-60/90-A	AMP-600	WEC-200	RWM-600 / MF5
Description	Page 334	Page 334	Page 335	Page 335	Page 338	Page 338	Page 339	Page 339	Page 340	Page 341
Characteristics	• Wall-mount proximity reader for EM-tags	• RFID reader / writer for EM- and Mifare tags	• Desktop RFID reader / writer for Mifare tags	• CF Slot RFID reader for Mifare tags	• High performance proximity readers featuring long range and small dimensions • Also very professional secure data versions	• High performance proximity sector reader • Also very professional secure data versions	• High performance proximity reader featuring long range and small dimensions	• ISO15693 RFID 13.56Mhz reader/writer. Perfect for multi-tag solution to be read in one time in a long queue	• Converter Wiegand to Ethernet • Professional connection of Stand-Alone devices	• RFID read-/write module for in-counter-installation • High-grade mounting scanner for OEM-Projects
Special Features	Visual and acoustic read confirmation	Encoding ID tags on site, any ID can be programmed	Device returns signal when card is removed	Programmable software trigger	Weather resistant, high power supply range from 5 to 12.5 VDC, ideal for in-counter installation	MF700 reads sectors	Weather resistant, high power supply range from 5 to 12.5 VDC, incl. door sensor	Reading distance up to 30 cm flat aerial design, reading 16 tags at the same time 16, IP40	Support of many Wiegand-Formats Easy ethernet integration because of own ID	Extensive software-kit, incl. demo-software, source code, in-depth documentation
Target groups	Time and attendance, Pre-payment, Prepaid parking / meal coupon, Ticketing	suitable for customer to program tags as requires	Tracking, Retail, Customer, Loyalty, Leisure, Gambling, Prepaid parking	suitable for mobile/ PDA RFID applications	For any RFID data collection, f.e. tracking, serialnumber check	Access Control, for any RFID data collection, secure data systems	For any RFID data collection, f.e. tracking, number check	Valuable items/assets tracking, Library gate, access controll, Retailing	Online-access control, network-applications	Installation, backfitting, enhancement of any systems

Time recorder

Access control / fingerprint reader

Mobile Transponder- and magnetic stripe reader

Ethernet terminal

Model	TR-510	TR-515	TR-4030	AC-903 / AC-905	SF500/SF600	GS2000	PCR-/MFR-120	MSR-500	MSR-120/U	FAT800
Description	Page 343	Page 343	Page 344	Page 344	Page 345	Page 345	Page 346	Page 346	Page 346	Page 347
Characteristics	• Cost effective time recorder for statio-nary time recording	• Ethernet time recorder with capacity for 8,000 registrations and RFID reader	• Ethernet or stand alone time recorder with large LCD display • Versions with fingerprint readers	• Entry-level stand alone acccess control unit • Access control via RFID • With Pin-Pad	• Stand alone access control system • For RFID-tags • With fingerprint-reader • Different entry-modes	• Portable RFID reader with metal housing	• Mini Portable Proximity RFID Reader with LCD • Reads tags in 125kHz-Range (EM4102) • Mifare optional • Miniature format	• Mobile magnetic stripe reader • Very compact and robust	• Small magnetic card reader with display • Very robust and compact • Reads all three tracks	• Ethernet data terminal
Special Features	Built in relay / door opener sensor	Built in relay / door opener sensor	Door opener sensor and built-in floppy disk drive for data exchange Version with fingerprint reader	Programmable via keyboard; optional with integrated magnetic stripe reader (AC-905)	Biometric fingerprint identification and 13.56 Mhz RFID technology combined	Uses Alkaline battery, robust Baton type metal housing	LCD display with background light	Uses Alkaline battery	LCD display with background light	Programmable keypad with 20 keys alphanumeric LCD display (16x2 characters)
Target groups	Offline Time-Recording, Time-Registration	Online Time-Recording, Time-Registration	Online Time-Recording, Registration	Stand alone access control solutions	Time attendance, access control and hotel locker management	Safe guards, inspection, maintenance, asset management	Time attendance data collection of employee	For mobile MSR applications	Mobile time and attendance, payment	Cash cards membership cards

Promag

Enhancing the Supply Chain with RFID

RFID has captured the attention of many leading companies today who are making significant investments of money and time to make this technology feasible in their operations. The goal, however, is to leverage internal RFID structures to capture and share real-time business information across entire enterprises and with trading partners. In other words, RFID deployments based on open, standardised EPC interfaces that enable interoperability and multi-vendor implementations may achieve the ultimate in global data sharing: total asset visibility.

RFID can transform the following business processes:

Supply Chain Management

Thousands of inbound and outbound shipments can be identified with RFID smart labels that enable unattended identification, verification and sorting at different points in the supply chain across trading partners and distribution centres.

Inventory Control

RFID can significantly deliver correct and current information about inventory levels to allow companies to ensure they can deliver what they have promised. In addition, better inventory control reduces storage space and labour costs and improves asset utilisation. It also enables faster billing cycles and contributes to cash flow.

Asset Management

RFID promises more effective asset management by providing real-time information about location of assets ensuring employees always have equipment, tools and other resources when and where they need them.

Work in Progress

Along the assembly line, tasks associated with WIP can be reported back to the systems with RFID, identifying that each step of the assembly process was completed and ensuring that quality control measures were taken reducing make-overs.

Anti-counterfeiting/Track and Trace

Materials authentication is another complementary asset management application. It provides a way to detect counterfeit products and can ensure that only authorised parts and supplies are used. Many organisations in the pharmaceutical industry will use RFID to comply with FDA rules to improve the security of the drug supply chain. This includes grey market trading and product recall.

Promag RFID

RFID technology has already been a hot topic for years. While economic, technical and legal aspects are still being discussed, it is already used successfully in many fields for quite a long time and is widely accepted. RFID can be used as complete solution or component in larger systems: contactless access control is an enormous market segment with unexpected potential that is getting more and more important. Resellers and system integrators have vast opportunities, as the number of potential customers, applications and business segments is seemingly unlimited.

As RFID solution provider you establish yourself in a market that will be growing significantly in the next years. Massively increasing supplies have already pushed the prices of RFID tags to a level that makes RFID an attractive alternative or addition. Many bar code applications, for instance, are realised more easily and securely with RFID tags than with conventional labels.

RFID products from Promag offer hardware for integration into any system that can be used instantly and for all possible applications. A large choice RFID modules for various transmitting technologies, shapes, connectivity options and protocols are available for every application that already exists or is in development: desktop devices for writing car park and customer cards are available as well as weather-resistant readers for access control of cars and individuals in security areas or at automatic gates and door in entrance and exit areas.

Promag is the leading Taiwanese manufacturer of RFID readers and writers. Many years of experience guarantee professional high-quality devices and a wide range of modules and special-purpose hardware. Jarltech has been official Promag distributor for many years. Our professionally trained staff will assist you with any RFID-related issues and provides attractive services.

Promag PCR-942

- **Contactless data collection with RFID**
- **Reads EM4102 compatible tags**
- **Seamless integration into existing systems**
- **Wall-mountable**
- **Visual and acoustic read confirmation**
- **RS232 interface**

The PCR-942 is a stationary RFID reader with serial interface for surface mounting. Use it as an access control terminal, a time clock or as a personal identification system. Serial data transmission makes the device perfect for a universal and smooth integration of RFID technology into various applications.

Every successful reading process is confirmed by the terminal with both an acoustic and a visual signal (LED). Programme the PCR-942 individually – all control commands are listed and explained in detail in the included user manual. The maximum tag data length of ten hexadecimal characters that is sent to the serial interface can be limited individually.

The PCR-942 is capable of detecting all 125 kHz transponders that comply with the EM4102 standard. It also features an extra port for additional input devices like a magnetic stripe reader. If two read units are used, all data is sent over the same cable to the serial interface.

Specifications	Item number
• PCR-942, RS232	pmpcr942

Information

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Promag GPW-100/PRW-106

- **Read/Write device for RFID transponder**
- **Automatic ID generator**
- **Serial interface (RS232)**
- **Also used to copy transponders**
- **EM4102 compatible**
- **Option: PRW-106 for ISO 14443A-Tags**

The GPW-100 is a stationary read/write device for EM4102 compatible RFID transponders. It is particularly intended to write sets of transponders or individually encode tags.

The included software writes an ID to the transponder – enter the ID on your keyboard, import it from files or let the software automatically create a serial number. Connect the device to the host over the serial interface (RS232). The GPW-100 works with tags that use the 125 kHz frequency band. It can output IDs in decimal, hexadecimal or Wiegand format. Certainly a useful and practical addition to all Promag systems.

Additionally, we offer the PRW-106 as a stationary reader/writer that offers all features of the GPW-100 but uses RFID transponders with a frequency of 13.56 MHz. In a range of 3 cm it reads and writes ISO14443-A tags exceptionally fast.

For a complete range of RFID cards and transponders, please see page 347.

Specifications	Item number
• GPW-100, RS232	pmgpw-10
• PRW-106, RS232	pmprw106

Promag PCR-340/360

- **Professional reader for RFID tags**
- **Reads 125 kHz and 13.56 MHz transponders**
- **Supports EM technology, Mifare MF1, Ultralight and DESFire**
- **3-in-1 multi-interface: RS232, keyboard wedge and USB**
- **5V AC power supply included**

The PCR-340 is a stationary reader for RFID tags with a dual-frequency aerial. It reads not only all tags that use the EM standard, but also Mifare 13.56MHz transponders. It reads 125kHz transponders within a range of 8 cm and 13.56MHz RFID tags that comply with the 14443A standard within a range of 4 cm. The PCR-340 features a 3-in-1 interface that offers your customers a keyboard wedge, serial and USB interface for easy access from a computer.

Its dual-frequency allows professional support for various transponder hardware. The PCR-340 is included in the SF500/SF600 starter kit for biometric access control.

The PCR-360 - like the PCR-340 - reads transpoders with 13.56 MHz, but interprets tags compliant with the ISO15693 and the 18000-3 standards. It can be connected via USB interface.

The required 5V AC power supply is included in every standard shipment. For a complete range of RFID cards and transponders, please see page 347.

Specifications	Item number
• PCR-340, PS/2, RS232, USB	pmpcr340
• PCR-360, PS/2, USB	pmpcr360

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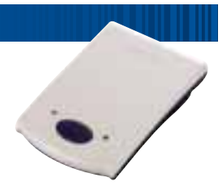
Promag PCR-300/330



- **Stationary RFID reader**
- **Small size**
- **EM4102 compatible tags (125 kHz)**
- **Automatic read**
- **Versatile application**

The Promag PCR-300/330 is a stationary reader for RFID tags and cards. Easy integration into your applications makes it a preferred choice for POS, customer retention, discount, debit card systems or even as a waiter lock.

Depending on which version you use, the device is simply connected to the RS232 or USB port of any PC. The reader can detect transponders within reading range automatically or with the press of the button, sending its data to the interface afterwards. In order to process any read transponder data, your software application is required to poll the interface actively.

Once the card is removed again, the PCR-300/330 sends a value to the interface. You can use this function easily to determine if the user is still working the terminal (waiter lock function).

Your own individual software for Promag hardware is also easily written. The device is controlled with ASCII commands. Further documentation of all commands and functions is included with the device.

Specifications	Item number
• PCR-300, 125 kHz, read only, USB	pmpcr300u0
• PCR-300, 125 kHz, read only, RS232	pmpcr300r0
• PCR-330, 125 kHz, HID, read only, USB	pmpcr330

Promag PCR-310

- **Stationary RFID tag reader/writer**
- **For ISO 14443A tags**
- **Also for Mifare Class and Mifare PRO**
- **Versatile applications**
- **Can be used as waiter lock using »PC-Security« software**
- **RS232 or USB interface**

The PCR-310 is a stationary reader/writer that operates with ISO-14443A transponders, compliant to Mifare Class and Mifare PRO standards. This compact unit (only 100x65 mm)allows you to integrate all kinds of solutions with RFID cards, tags or transponders fast and easily into various software applications, for example the point-of-sale, in a hotel, in fitness and recreation centres, for access control and time recording or even bonus systems, customer cards and member cards – the PCR310 can be used almost anywhere.

Depending on which version you use, the device is simply connected to the RS232 or USB port of any PC. Optionally, you can use the device with the included ProxGina software (»PC-Security«) and window drivers to secure workstations against unauthorized use.

A detailed product documentation as well as all drivers are also included in the delivery. For a complete range of RFID cards and transponders, please see page 347.

Specifications	Item number
• PCR-310, Mifare R/W, USB	pmpcr310u1
• PCR-310, Mifare R/W, RS232	pmpcr310r1

Promag RWD-145

- **Portable read/write unit for CompactFlash slots**
- **Contactless data collection**
- **ISO-14443A, Mifare MF1 Ultralight**
- **Windows CE/ 2003 Mobile compatible**
- **Low weight: only 30 g**

The RWD-145 is a mobile RFID read and write unit for PDAs and PCs with CompactFlash slot (type1). It offers an excellent solution for universal data collection, access control, time clocks, logistics tracking and other applications with mobile computers and PDAs.

The unit reads and writes all ISO14443-A and Mifare MF1 Ultralight compliant transponders. The RWD-145 helps you create your own solutions for data management, as users individually read and write their transponders. Use it to create loyalty systems, to register fair visitors, hospital patients or devices, as a mobile time clock at construction sites and more. As the device not only reads transponders but also writes them, it will you give entirely new application possibilities.

Using the device is extremely simple – regardless of which type of PDA you use: required drivers are simply synchronised from your PC to the PDA. After driver installation, all tag IDs are sent to the keyboard buffer of the PDA. In other words, all input data is directly displayed at the position of the cursor on the PDA display. In this manner, the integration of RFID functions into your own or commercial PDA applications is amazingly easy. Data can be saved on the PDA as it is typed in. The RWD-145 is compatible with Windows CE and Windows 2003 Mobile.

Create your own applications using any programming language of your choice or the included documentation on the open GNET plus command protocol of this device. Optionally, you can use available Visual Basic libraries. Identical readers for the following transponder types are available:

•PCR-125 (EM-compatible 64 bits, ASK Manchester coding)
•MFR-135 (ISO14443-A Mifare MF1/Ultralight).

More information can be found on page 336.

Specifications	Item number
• RWD-145, reader/writer, 13,56 MHz	pmrwd145
• PCR-125, RFID reader, 125 kHz	pmpcr125
• MFR-135, reader, 13,56 MHz	pmmfr135

Mobile Data Collection by PDA

- **Mobile Data Collection by PDA**
- **Optional bar code, magnetic stripe reader or mobile reader/writer for RFID transponders**
- **Bar code scans with Symbol laser engine**
- **Optional CF or SD card slot**
- **Low weight: ca. 40 g**
- **Windows CE compatible**
  Pocket PC 2002/2003 or Palm OS 5.x

These mobile slot readers for bar codes, magnetic cards or RFID tags open up completely new possibilities for mobile devices like PDAs, Subnotebooks, or new generation devices, such as PDA mobiles. Offer your customers innovative and fully integrated applications that are hardly possibly with conventional data collection devices.

Mobile systems like PDAs, navigation systems and other mobile devices that implement Windows, PalmOS or Pocket-PC operating systems provide a cost-effective platform, usually extensive functionality and an open system architecture. Choose from an almost inexhaustible pool of software applications and developing tools to build your own applications or to integrate the device into even the most complex systems seamlessly. Internet connection through Wi-Fi, UMTS or GSM, GPS, and even Bluetooth networking create an incredible degree of flexibility at a price that is unrivalled.

In the past, automatic mobile data collection (e.g. bar code or RFID) was usually only possible with very expensive special hardware without reaching the flexibility that is necessary. This is to be no more! Our cost-effective devices for CompactFlash or SD slots turn any commercial mobile device into a data collection device with auto ID functions. Jarltech offers you all components for professional operating data from one supplier. In addition, only a suitable PDA for your individual application is needed.

Our slot devices offer all usual functions required for automatic data collection. Naturally, we do not only offer bar code readers, but also versions with integrated magnetic stripe reader, or read/write units for RFID tags. Mobile stock-taking, time clocks, interactive warehouse systems can be easily realised with these new devices as well as logistics solutions in car fleet, patient or retail item management.

Integration into applications on your PDA is surprisingly easy: Our devices all contain a virtual keyboard wedge. In other words, all read data is sent directly to running PDA applications and entered at the cursor's position. Using this feature, the module itself does not require any memory at all – all data is directly saved on the PDA.

Specifications	Item number
• RWD-145, RFID reader/writer, 13.56 MHz	pmrwd145
• PCR-125, RFID reader, 125 kHz	pmpcr125
• MFR-135, RFID reader, 13.56 MHz	pmmfr135
• Champtech bar code reader for PDA, SD-Slot	prtsdslot
• Champtech bar code reader for PDA, CF-Slot	prtcfslot
• Magnetic stripe reader for PDA, CF-Slot	pmmsr123

Promag RWD-145

- **Portable read/write unit for CompactFlash slots**
- **Contactless data collection**
- **13.56 MHz, Mifare MF1 Ultralight**
- **Windows CE compatible**
- **Low weight: only 30 g**

The RWD-145 is a mobile RFID read and write unit for PDAs and PCs with CompactFlash interface (type1). It offers an excellent solution for universal data collection, access control, time clocks, material flow and processing time control or logistics applications using RFID tags.

The unit can read and write all ISO14443-A and Mifare MF1 Ultralight compliant transponders. The RWD-145 can help you to create own solutions for data management, as users read and write their transponders individually.

The RWD-145 can – in connection with a normal PDA – synchronize data simply using the included software and the PC to PDA connection cable. Windows CE compatibility offers here incredible performance. It is ready-to-use immediately and suitable for all your customer's mobile RFID applications. The device sends read IDs to the keyboard buffer instantly. The tag data is displayed exactly at the cursor position, as if it was input on a keyboard. Using this feature, the module itself does not require any memory at all – all data is directly saved on the PDA.

For further information on mobile RFID applications with the RWD-145, please see page 335.

Champtech bar code reader

- **Mobile Data Collection by PDA**
- **Symbol laser engine: 100 scans per second**
- **Optional CF or SD card slot**
- **Low weight: only 40 g**
- **Windows CE, Pocket PC 2002/2003 or Palm OS 5.x compatible**

Use the Champtech bar code Slotreader for any application that requires mobility while reading bar codes – and use it with your favourite mobile devices. The scanner is available as an extension card for either CompactFlash or SD slots. It opens your customers a whole world of new possibilities for mobile applications in logistics, retail, offices, laboratories, etc.

The integrated laser engine by Symbol reads all commonly available bar codes from a distance of three to fifteen centimetres. A hundred scans per second make the scanner a very aggressive reader while even dirty or flat bar codes are scanned without problems. The user simply triggers the scanning process with a microswitch at the side of the device.

The module decodes all commercial bar codes automatically and transfers the data to the PDA as if it were keyboard or touch screen input. All bar code information appears directly at cursor position – no adjustments needed. The reader is ready-to-use within a matter of seconds – simply install the provided driver on your PDA by performing data synchronization.

The Champtech bar code reader is available in two versions: Optionally for CF or SD slot. A minimum of weight and compact dimensions (only 40 g at 80 x 49 x 19 mm) make this the perfect solution for mobile PDA applications.

The provided drivers support all three popular mobile operating systems: Windows CE, Pocket PC 2002/2003 and Palm OS 5.x. Naturally, the device has a relatively low power consumption of only 75 mA, so that long operating times are guaranteed without recharging.

Promag MSR-123

- **Portable read unit for PDAs**
- **Reads all magnetic cards**
- **For the CompactFlash slot**
- **Windows CE compatible**
- **Low weight: only 50 g**

Our slot reader multiply a PDA's range of application by many times. The Promag MSR-123 magnetic stripe reader makes our range of mobile data collection devices complete. It offers all already mentioned possibilities of product control and personal data collection using RFID or bar code reading – plus space-saving on-site customer identification.

Simply insert the reader into the CF slot of your PDA and install the drivers using data synchronization from your PC. All required drivers are included with the device. Data collection of customer or credit card data is made fast and portable – an inconspicuous weight of less than 50 g and a size of 55 x 35 x 35 mm (W x D x H) while inserted makes it possible. The device writes all read data directly into the keyboard buffer, so all information appears immediately at the cursor. Your customers also do not have to worry about limitations, as the Promag MSR-123 is capable of reading all three tracks of a magnetic card.

Promag GP-/LBR-series

- **Proximity data collection with RFID**
- **Long-range RFID reader with up to 30 cm operating range**
- **Serial ASCII, Wiegand and Magstripe data format**
- **For 125 kHz transponders, EM4102 or Mifare 13.56 MHz**
- **5V to 12.5V power supply**
- **Weather-resistant**

The GP and LBR series readers offer the highest standard RFID applications. The compact RFID reader modules are the perfect solution for installation in machines, industry equipment and in-wall mounting. They read EM compatible tags at 125 kHz LF and Mifare tags at 13.56MHz HF within an operating range of 30 cm. The individual ID and data is transferred then to the host over the serial interface.

The modules can even be used for upgrading existing systems (e.g. bonus and billing systems, vending machines and similar) that previously used bar code or magnetic card technology. Simply install the module directly at or in the respective machine.

The data output format is individually selectable, which makes integration into existing systems much easier and allows flexible use of the modules. You can choose from RS232, ASCII, Wiegand and Magstripe. An optionally connected external aerial enhances the reader's operating range further. Circuit diagrams and a detailed installation manual are included with every device. Its generous input voltage range of 5 to 12.5 V makes extra adaptors obsolete. Simply connect the module to the power supply of the host system.

The readers' exterior design is different for various applications. The following overview gives a list of used standards and operating ranges:

- GP-8, EM4102, up to 8 cm reading range
- GP-20, EM4102, up to 20 cm reading range
- GP-25, EM4102, up to 25 cm reading range
- GP-25a, EM4102, up to 25 cm reading range
- GP-30, EM4102, up to 30 cm reading range
- LBR-100, EM4102, up to 20 cm reading range
- LBR-200, Mifare, up to 5 cm reading range

For an overview of various RFID tags and sub-models please refer to page 347.

Specifications	Item number
• GP-8	pmgp8
• GP-20	pmgp20
• GP-25	pmgp25
• GP-25a	pmgp25a
• GP-30	pmgp30
• LBR-100	pmlbr100
• LBR-200	pmlbr200

Promag MF700/MF7

- **Contactless data collection with RFID**
- **For Mifare Standard 4K, Mifare Standard 1K-Tags and MAD1+2**
- **Ideal for access control and time recording**
- **Robust and compact: only 83x47x16 mm**
- **Also suitable for outdoor use**
- **Variable power supply: 7.5V - 12V**
- **RS232, Wiegand or Magstripe output format**

The new MF700 transponder reader from Promag helps to realise customer-specific data collection with RFID tags on an absolutely professional level. The reader scans all tag information (not only serial numbers) that is stored in different sectors and MAD1/2 of the transponder. The chips are available in various designs and feature internal encoding to ensure a high level of data security and professional protection of personal data.

This makes the MF700 perfect for access control, user identification, inventories, payment systems, patient registration in hospitals etc. The reader uses transponders that offer multiple directories for applications. This means that instead of only saving patient numbers, the tags can also hold data like blood type, diagnosis and treatment plans.

If your customer's application only requires reading the ID number, you can also obtain a stripped-down ID reader version of the MF700, the MF7. The MF7 reads Mifare 1K and Mifare 4K transponders (UID) and is a simplified version of the MF700 that allows cost-effective RFID solutions.

Its compact size of only 83x47x16 mm makes it easy to integrate the MF700 into existing systems or install it into machines and cabinets. Installation on metal is also no problem. A variable power supply of 7.5 to 12V makes it compatible with many systems. A weather-resistant housing even allows outdoor installation (-10° to +60°C) or installation under other harsh conditions.

Every device receives a unique ID. Accordingly, the reader can be used in existing networks easily when used in combination with the Ethernet converter WEC-200 (for more information see page). Now large production facilities and companies can be networked instantly and whole office buildings or hospitals can be secured easily with professional authentication. Integrated RS232, Wiegand (26-128Bit) and Magstripe interfaces offer a high degree of flexibility for connectivity options.The MF700 is also available as development kit for immediate use – cable, AC adaptor, software, transponder cards (three pieces, 1K) and a PCR-310U for individual programming included.

For an overview of various RFID tags and sub-models please refer to page 347.

Specifications	Item number
• MF7, ID reader	pmmf7
• MF700, sector reader	pmmf700
• MF700sk, Development-Kit, incl. PCR-310U	pmmf700sk

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Promag GP-60A

- **Long-range RFID reader**
- **Up to 60 cm reading range**
- **Very compact: 21x21x2.8 cm**
- **Weather-proof**
- **RS232, RS485, Wiegand**
- **125 kHz, EM H4001/4002**
- **5V to 13.5V power supply**

The GP-60-A is a long-range reader that can detect RFID transponders from up to sixty centimetres distance.

An internal relay allows direct connection to door openers and other systems. Use the GP-60-A to implement security and access solutions easily or use it in car parks, line production facilities or container registration. Its long range even allows reading the transponder through walls and packaging. Once a transponder is correctly detected, an acoustic signal notifies users. All read data is transmitted over the serial interface to the host. The data output format is selectable, making integration into existing systems easy. You can choose among RS232, ASCII, Wiegand and magnetic card format. An open cable tail simplifies integration into existing systems. Another advantage of the GP-60-A is a variable power supply range from 5 V to 13.5 V.

The sturdy weather-proof housing is well-suited for outdoor operation at -10° to +60°C.

Specifications	Item number
• GP-60-A	pmgp60

Promag GP-90-A

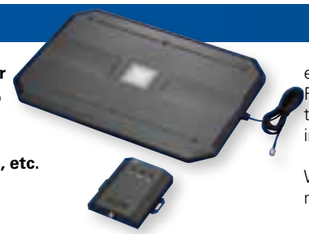
- **Long-range RFID reader**
- **Up to 90 cm reading range**
- **Extremely weather-proof and spray-water resistant**
- **RS232, RS485, Wiegand**
- **125 KHz EM compatible**
- **Integrated door opener**

The GP-90-A is a long-range reader that detects 125 kHz RFID transponders (EM technology) from up to ninety centimetres. Its enormous range results in a vast number of possible applications, such as personal identification, access control, or automatic time clocks in enterprises.
Each unit is equipped with an integrated connection for a door opener that receives an electrical pulse whenever a registration is successfully completed. Thus, you use it easily for stand-alone access control. Industrial applications that use production lines are also suited for the use of this terminal, as the RFID transponder can be detected automatically through packaging or from pallets. Any transponder that is in range of the terminal is read automatically and then transmitted in the desired format.

The GP-90-A indicates a successfully scanned ID both visually and acoustically. Input data can be transmitted over different interfaces (RS232, RS485, Wiegand and Magstripe). An open cable end makes integration into existing systems significantly easier for users. Other advantages for system integration include a variable power supply of 120V/60Hz or 230V/50Hz and the sturdy weather-proof and break-proof plastic housing.

Specifications	Item number
• GP-90-A	pmgp90a

Promag AMP600



- **Special-purpose RFID reader**
- **Recognises and decodes up to 16 tags simultaneously**
- **Possible applications: rental systems, laboratories, etc.**
- **Compact stationary unit**
- **Aerial included**
- **13.56 MHz, ISO15693**
- **Serial interface (RS232, RS485)**

The Promag AMP600 is a compact reader for standard 13.56MHz Mifare transponders (ISO-15693) that can be used in special retail security and rental systems, securing samples in laboratories and more. The professional device reads and writes information of 16 tags simultaneously and is therefore suitable for a wide variety of special applications in POS, in video stores, for security, laboratories and more. The tags may contain a serial number as well as a small database, e.g. to keep track of changing data values over a longer period of time.

Its thin design makes it perfect for stationary installation, e.g. at a cash desk or counter. With its modern housing colour the AMP600 also optically integrates itself in demanding POS areas. Your customers attach a transponder to their objects using labels or tags. Thus, expensive goods (like jewellery), laboratory items (like analysis), or media (like DVDs) can be secured against theft, easily tracked and automatically updated with data. The high-performance aerial can read up to 16 tags at a distance of up to 30 cm.

With an enormous speed of less than 24 ms per tag, the reader is able to distinguish tags perfectly and avoid erroneous readings. At the same time the device can also write data to the tags, e.g. to store experimental results or rental history. The serial interface (RS232, RS485) guarantees seamless integration into existing systems while the two metre aerial cable offers technical staff high flexibility during installation.

We offer you an Ethernet-converter for long-distance data transfer via networks. More information can be found on page 340.

We offer you an Ethernet-converter for long-distance data transfer via networks. Comprehensive product information of the WEC200 is available on page 347.

Specifications	Item number
• AMP600	pmamp600

Promag WEC-200

- **Ethernet converter for real-time online networking**
- **Wiegand interface compatible**
- **TCP or UDP data transfer**
- **Ideal for access control and time recording**
- **Robust and compact: only 100x97x25 mm**

Data, once collected, often has to be transferred over a large distance. Large and medium-sized companies can often use their own company network for this purpose. However, many readers only have a standard interface and cannot be integrated into the network.

The WEC-200 converts data packets of various data collection devices with Wiegand interface into an Ethernet compatible format. It supports Wiegand formats with 26, 30, 34, 35, 37, 38 and 42 bit. This allows long-range data transfer over the company network of your customers offices and production facilities.

With devices such as the Promag access control unit SF-500/-600 or RFID readers of the GP series, the converter takes the data packet with the serial number of the accessed tag and transfers it over TCP/UDP. Depending on the functionality of the reader and its software, your customers are able to track which employee enters which area at what time. In logistics the same can be used to locate articles, products or parcels by comparing read data with previously filed data.

The readers are simply connected to the controller at the Wiegand interface. Ideally, this controller is directly connected to the next hub or router to provide online host communication. This makes all customer investments with real-time requirements absolutely future-proof.

Each WEC-200 has its own ID and can be easily configured online. A robust metal casing makes the converter even useful under harsh operating conditions.

Specifications	Item number
• WEC-200	pmwec200

Information

Current RFID standards

For a long time the RFID market was without uniform standards for design and programming of transponders. Most manufacturers used different command codes and tags as well as systems were not interchangeable. However, by now two standards have become generally accepted and parameters for RFID tag production and related hardware is now defined clearly to ensure compatibility globally.

ISO/IEC 15693: This standard was originally intended for contactless smart cards only. Shortly after it was made public, Texas Instruments and Philips Semiconductors made it the guideline for future RFID transponders and eventually other manufacturers started to accept and support it. The standard defines physical, electrical, electronical and programming (transmission protocols, etc.) characteristics used by the systems.

ISO 15693 transponders offer the advantage of a standardized independent communication protocol which is based on a transmission frequency of 13.56 MHz. Naturally, ISO 15693 compatible read/write controllers work with all globally produced ISO 15693 transponders.

Transponders currently using ISO 15693:
Tag-it HF-I, EM4135, Tag-it HF, Mifare Ultralight, Mifare Standard, EM4035 Crypto, SRF55V02P/S my-d, SRF55V10P/S my-d, SRF55V01P my-d, LEGIC advant ATC128/256-MV210, I-Code 1 HC SL1, Philips I-Code SL2/SLI-S

ISO/IEC 14443A: This standard is intended for devices that transmit data over short distances only. The interface includes signal definitions for communication between transponder and reader. This allows bi-directional data transmission. Like ISO 15693, this standard defines the physical and technical characteristics of the systems (controller, aerial, etc.) and controls all data transmission protocols.

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Promag RWM-600

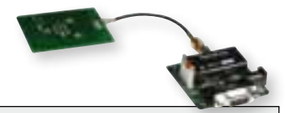
- **OEM RFID read/write module**
- **For 13.56 MHz, ISO 15693**
- **Kit incl. demo software, protocols and DLLs**
- **Access of up to 16 smart labels simultaneously**
- **Very compact circuit board: only 55x50x15 mm**
- **Also suitable for outdoor use**
- **RS232, Wiegand or Magstripe port**

Possible applications of the RWM-600 are extremely diverse, as the development kit offers unlimited design options. Its use is unlimited – whether it is employee or customer identification at kiosk or information terminals, applications in vehicle, navigation or billing terminals, or applications in security and authentication systems. The variable power supply voltage of 7.5 to 12 V supports this as well.

Transponders are available in different versions or types (screwable, credit card format or key chains, etc.), as well as all standard frequencies. An overview can be found on page 347.

The RWM-600 is an RFID module that can be easily used for integration into own systems, machines, terminals and other devices. Use the module to write and read all ISO/IEC-15693 compatible transponders and smart labels, such as I-CODE SLI or Tag-It HF-I from a distance of up to 20 cm. The RWM-600 is available either as separate module or as fully functional kit for immediate use that includes all required parts: The development kit includes the add-in reader/writer with serial port (RS232 or RS485), an aerial and of course demo software with many functions. The system is located on an add-on board and has a SUB-D port for data access, a standard aerial port and jack socket for power supply.

The device uses the open protocol standard »GNet Plus« for which various tools and development kits are available. The provided software demonstrates exactly how access and data manipulation of smart labels works. It is provided as a binary version as well as source code in Visual Basic 6 and C. Furthermore, the package contains communication libraries that are used to integrate the hardware into different operating systems and programming languages. An extra aerial designer application helps users develop their own aerials, if the supplied aerial is not going to be used.



Specifications	Item number
• RWM-600	pmrwm6
• RWM-600, Development-Kit	pmrwm6kit

Promag MF-5

- **RFID module for contactless data collection**
- **For ISO/IEC 14443A compatible transponders**
- **Robust and compact: only 65x100x25 mm**
- **For integration into custom devices**
- **RS232 TTL interface**
- **Also for outdoor use (-10° to +60°C)**
- **Power supply: 5V**

The MF-5 module is an easily integrated reader/writer for Mifare transponder cards. The device reads transponders using standards ISO/IEC Standard 14443A, Mifare Class and Mifare PRO at a distance of up to five centimetres. Install the module behind plastic covers and blinds in terminals or workstations, machines and access control systems. Because of its compact size, this reader/writer is also suitable for portable devices. Connect the modules simply at the RS232 TTL interface.

The device uses the open protocol standard »GNet Plus« for which various tools and development kits are available. Additionally, the provided software demonstrates in detail how access and data manipulation is achieved on each transponder. The software is provided as binary as well as Visual Basic 6 and C source code. Furthermore, the package contains communication libraries that are used to integrate the hardware into different operating systems and programming languages.

The reader can also be used to create specially defined security codes to lock your applications. It offers an unlimited range of innovative applications and easy system integration – whether it is employee or customer identification at kiosk or information terminals, applications in vehicle, navigation or billing terminals, or applications in security and authentication systems.

All 14443A standard compliant transponder tags can be used. Transponders are available in various versions and types (threaded, credit card type, or key fob type, etc.), as well as for all common frequency ranges. An overview can be found on page 347.

Specifications	Item number
• MF-5	pmmf5
• MF-5, Development-Kit	pmmf5sk

Promag Time Recording/Access Control

Gain access to new markets and target groups and likewise more profits from access control and time recording devices! All companies that have several or more employees require access regulations regarding offices and departments. Time and performance recording is also more important than in the past, as working times and places are increasingly flexible.

The result is an immensely large market for you, as many firms have neglected these issues in the past and require new equipment or upgrades now. Electronic systems make control and evaluation of both applications more flexible and cost-effective than manual systems. The large range of cost-effective and professional products and solutions from Promag turn you automatically into a competent consultant for your customers.

Software developers and full-solution providers prefer Promag systems for their excellent integration capability in existing hardware and software environments. No matter what customer requirements, whether it is a serial or Ethernet network or how employee data is processed, Promag products are professional and always offer the highest degree of flexibility.

A large scope of access solutions for employee access control and time recording offers your customer almost custom-tailored technology. No matter whether magnetic cards, contactless chip cards (RFID), fingerprints, PINs or a combination of them: Promag provides the right system for every use. Choose from stand-alone or online systems, mobile and stationary devices and offer your customer the perfect solution for time recording, access control or both in one.

Promag TR-515-ER

- **Online / Offline time clock terminal**
- **Memory for 8,200 registrations**
- **RFID, magnetic stripe or bar code reader included**
- **Ethernet interface**
- **ASCII format data output**
- **LED display (4x7-segment characters)**
- **Suitable for wall and table installation**

The TR-515 is a modern online time clock terminal with Ethernet interface. Reasonably priced, it is a cost-effective alternative to expensive high-end terminals while still supporting all major functions of a modern time clock terminal. The device is available in three different versions. You can choose among bar code, magnetic stripe or RFID reading units. As it is directly connected to your computer network and offers various related functions, it is the perfect choice for time clock applications in medium-sized and large enterprises.

Connect the unit to your computer network or a PC using an Ethernet cable. An external 9V AC adaptor for power supply is included in the package. Use the setup software, then allocate an IP address to your terminal and set a unit ID to distinguish it from other units in the same network. The device is now ready-to-use and can be installed immediately. A drilling template makes installation on walls or tables easy. The TR-515 can also be installed upside-down, if required for ergonomic or installation reasons. In this case, you may use the included upside-down display labels. The display itself can be turned by 180 degrees using the software setup.

Use the TR-515 software manager to control all functions of the TR-515 from any PC located in the same network. For example, you can configure how registered user data is transmitted (automatically in intervals, manually, by email). Intervals and individual transmission points can be software configured. Two data formats are available – choose between ASCII text and CSV files. The database structure is really simple: terminal ID, transponder ID, event (»IN« or »OUT«), date and time.

Additionally, you will have the opportunity to limit the ID length to a fixed number of characters. The device can use up to fifteen decimal places of the transponder. Relay switches (automatically opening doors after ringing the bell) and event configuration (e.g. event »IN« only within 08:00-10:00, event »OUT« only within 17:45-19:30) saves time for all users, as cumbersome key presses become irrelevant. All commands, functions and protocols are described in detail in the included manual.

Provided with the unit are the TR-515 software manager, two display masks, two connection cables, one installation kit, an AC adaptor and a drilling template. A cable covering is optionally available. (See page 347).

Specifications	Item number
• TR-515-ER, with RFID reader	pmtr515er
• TR-515-EM, with magnetic stripe reader	pmtr515em
• TR-515-EB, with bar code reader	pmtr515eb
• TR-515-ERM, Mifare, 13.56 MHz	pmtr515erm

Promag TR-510

- **Cost-effective time clock device**
- **Stand-alone operation possible**
- **Serial interface (RS232, RS485)**
- **EM4102 compatible transponder**
- **Saves up to 8,200 entries**
- **Suitable for wall and table installation**

The Promag TR-510 time clock terminal is intended for enterprises that want to record working hours cost-effectively. The terminal has two function keys (IN and OUT). An employee registers by proximity using his tag (transponder) and chooses an event (e.g. IN or OUT). For each registration, the unit creates a new database entry in its internal memory. Data is transferred to the PC using the Promag software, or read from the open interface commands from your own applications.

The unit is connected via serial (RS232, RS485) interfaces, with which up to 255 devices can be networked. All data sets are stored simply as ID or time formats in the device's databank. The TR-510 is available with a built-in magnetic stripe, RFID or bar code reader. The compact plastic housing is suited for wall or table mounting. A cable covering is optionally available. (See page 347).
Commands, protocols and additional information are provided in detail in the included software CD.

Specifications	Item number
• TR-510-R, with RFID reader	pmtr510r
• TR-510-M, with Magnetic stripe reader	pmtr510m
• TR-510-B, with bar code reader	pmtr510b

Information

Always your partner - never competitor!

Jarltech is one of the largest European distributors in the POS and Auto-ID market. We offer a wide range of high quality hardware to resellers, system integrators, POS dealers and computer stores.

Jarltech never competes with you. We are your partner, not your competitor. We value you as softwarehouse and system integrator and believe that only you can do best to win the business for both of us.

As we do not offer solutions, nor software, nor setup or on-site service, we need your competence, knowledge and services to make our hardware running. Therefore, we never sell to end-users or industrial customers.

This means, we keep the channel clean so you can rely on the fact that we are always your partner, never your competitor.

If you have any questions, just call us free of charge: Phone: (+43-1) 485 26 05 0.

Promag TR-4030 / TR-4050

- **Online time clock with RFID reader**
- **Also suited for access control**
- **Fingerprint reader version (TR-4050)**
- **Saves up to 12,000 entries (TR-4050: plus 1,900 fingerprints)**
- **For stand-alone and networked applications**
- **Offline data transfer with floppy disks or USB sticks (TR-4050)**
- **TR-4050: Quick on-site configuration with administrator cards**
- **Large LCD display (4x7 characters)**

The TR-4030 is an online time clock terminal that was designed for recording working hours in medium-sized and large enterprises. The terminal is available with an integrated bar code, magnetic or RFID reader (EM compatible or ISO 14443A), and offers your customers a high degree of flexibility with a wide range of reader and identification options and their respective combinations. High-quality design and excellent ergonomics combined with Ethernet-based network integration with up to thirty terminals make the TR-4030 an attractive choice for the most sophisticated and professional applications.

All devices of the TR series include an internal relay for opening doors and controlling alarm systems. The door controller unit is directly connected to the terminal. Using the device is extremely simple: users register their cards with the device by simply holding the transponder close to it. The terminal creates a database entry with event (in, out, break), card ID and time up to 12,000 times. The recorded data is read offline using the integrated 8.9 cm (3.5“) floppy disc drive (TR-4030), using a USB stick (not supplied) connected to the USB port (TR-4050), or online using the Ethernet interface of the device.

The terminal version TR-4050 allows registered users (up to 3,000) to gain access to the terminal with their fingerprint. Users only store their fingerprint data once while all other connected devices receive the data over TCP-IP. An Ethernet connection allows network access to the records. If the device is disconnected, it can store up to 8,200 records in its offline mode. Large companies can connect up to 255 TR class devices in a network.

In order to prevent possible read errors, the online terminal features an integrated RFID reader (125 kHz). If a user’s fingerprint cannot be recognised, access is still possible with an additional tag.

Further external peripherals can be connected to the terminal whenever necessary. Your customers can use the device with magnetic cards as well as bar code labels by connecting an external MSR or bar code scanner to the RS232 interface. Setup of every station is performed directly using the keyboard or simply with the software.

Specifications	Item number
• TR-4030, with RFID reader	pmtr4030rd
• TR-4030, with bar code reader	pmtr4030b
• TR-4030, Mifare, 13.56 MHz	pmtr4030mf
• TR-4050, fingerprint reader	pmtr4050

Promag AC-903

- **Stand-alone access control**
- **Ready for outdoor installation**
- **Easy configuration with keypad**
- **Access control for more than 240 users**
- **Three different access modes**

The Promag AC-903 is a stand-alone access control terminal for RFID tags (transponders. This terminal offers a cost-effective access control alternative in small and medium-sized enterprises. For every terminal you can configure up to 240 users. All connection points of the AC-903 are clearly labelled and created through screwed connections. If an alarm system exists, you might also connect the terminal to it.

As it is very robust and weather-proof, you can use the terminal also outdoors. The AC-903 supports three different access modes: Tag access, PIN access, PIN + tag access. Internally, the device compares saved profiles and activates an electric door opener once the transponder has been successfully registered.

Three modes are available for access: open (access without input), authorised (transponder or password access only), and locked (no access).

Programme the AC-903 via its keyboard – no computer connection required. Integrated Flash memory protects the terminal from data loss, even after long black-outs. All cables and a detailed manual are included with the device.

Specifications	Item number
• AC-903	pmac903

Promag AC-905

- **Stand-alone access control**
- **Easy configuration with keypad**
- **With magnetic stripe reader**
- **Access control for more than 240 users**
- **Three different access modes**

The Promag AC-905 is a stand-alone access control terminal for 2-track magnetic cards, designed for use at doors and entrance points. Use the provided drilling template to install the device onto almost anything in a matter of minutes.

Configuration of the device is extremely simple: at first, you have to set up a master ID that ensures access to user management. User accounts can be accessed and set up on-site using the keypad – then you can issue cards with the respective IDs to your users.

The device supports three different access modes: Magnetic card, PIN, magnetic card + PIN. Managing part-timers, shift workers or cleaning personnel can be created easily by included individual time zones which can receive an ID on their own. Integrated flash memory protects the terminal from data loss, even after long black-outs.

The door opening unit and the alarm sensor are easily connected to the terminal using the device’s screwed connections. If someone tries to open the device or manipulate it, the device recognises this and triggers an alarm.

Specifications	Item number
• AC-905	pmac905

PROMAG™

Promag SF60X

- **Professional fingerprint access control**
- **Combines biometric and proximity data collection**
- **Reads fingerprint data and RFID tags according to ISO14443A (version for EM compatible tags optional)**
- **For up to 1,900 registered users**
- **RS232, Wiegand and ABA-TK2**
- **Fingerprint software included**

The access control systems of the Promag SF series offer your customers a new generation of data collection with a high standard of security. A combination of fingerprint and contactless data collection via RFID is used for identifying users. The device reads tags and transponder cards with 13.56 MHz (ISO 14443-A-Standard) at a high speed and provides access only after matching collected information. Your customer selects three access modes: only via card, only via fingerprint, or at the highest security level using a combination of a card and fingerprint.

The terminals provide you with professional support for all time collection applications in companies (e.g. in hotels), cashless payments, customer systems and diverse models of employee identification such as log-in systems in the IT branch.

The terminals provide you with professional support for all time collection applications in companies (e.g. in hotels), cashless payments, customer systems and diverse models of employee identification such as log-in systems in the IT branch

On the other hand, the SF600 is also intended for access control and time collection systems in large companies. Fingerprints of up to 1,900 employees are directly stored in the devices, providing high access security: lost employee cards do not allow access to strangers or loss of employee information. Additional connection of online systems to support the extensive data bank of the fingerprint information is not necessary, despite the large amount of collected data. For fast integration with existing customer systems, the devices of the SF series are equipped with a 3-fold interface, providing RS232, Wiegand and ABA-TK2 directly to you.

In order to facilitate the introduction to a new technology and give you a demonstration of the new hardware, we offer you special starter kits in order to professionally prepare you for upcoming customer appointments. For each version of the SF family from PROMAG we offer you a professional package that includes the following components respectively: configuration and fingerprint software, the corresponding reader and a PCR-340 for programming support. (More information can be found on page 335)

Specifications	Item number
• SF600	pmsf600
• SF600 - Starterkit	pmsf600sk
• SF601	pmsf601em

Promag GS2000

- **Mobile torch-sized RFID data collection device**
- **Saves up to 14,320 entries**
- **Impact-resistant metal housing**
- **EM4102 compatible transponder**
- **100,000 scans for each battery charge**
- **Weather-proof up to -10°C**

The Promag GS2000 is an RFID terminal for mobile registration of 125 kHz, EM standard transponders. It is especially suited for time clocks, stock-taking, industrial data collection, quality control, route and work process control, measuring manufacturing time, etc. Due to excellent workmanship and its weather-resistance (operation temperature down to -10 C°), the terminal is the perfect choice for outdoor use. Drops have no impact on the GS2000 at all because of its metal housing. These mobile terminals come in handy wherever RFID transponders do not require direct processing.

The device is IP66 compliant spray-water-resistant and water-repellent. Read distance to the transponder is approximately 3-4 centimetres. A correct read is indicated both acoustically and visually. The GS2000 is available as USB or serial (RS232) version – integration into existing systems is made easy.

Even inexperienced personnel can set up these devices after a few step at the PC: a charger is connected to the USB port of your computer – totally independent of external power supplies. Windows starts the installation automatically – you only need to enter the driver source (the provided CD). After driver installation the system creates a virtual com port for data queries. Then the device is ready to use. Use the included GS2000 software monitor for configuration and protect it with a password against unauthorised use. Choose the correct COM port for your GS2000 and allocate a device ID to the terminal to distinguish it from other connected terminals. One click and you transfer all collected data to a specified directory. The transferred database consists of device ID, transponder ID, date and time. As long as no special file names are specified for the report, the files are saved under the current date. After data transmission, users have the options of automatic deletion of the data, time synchronisation, or device shutdown. Users can use a single click to display the amount of saved entries on the GS2000.

The software package includes a second software application called »Guard-Tour-Utility« - use it to allocate transponder IDs to names in the software (e.g. ID 12345=warehouse, ID 6789=reception, etc.). Transponders that already have a name allocated to their ID are shown with their name instead of their ID number. On request users can use the software to compile a report on respective transponders. The memory of the GS2000 can hold over 14,300 entries. The device is powered with a C alkaline battery (1.5 V), which can last for at least 100,000 scans.

Specifications	Item number
• GS2000, USB	pmgs2000us
• GS2000, RS232	pmgs2000rs

Promag PCR- /MFR-120

- **Compact RFID reader with display**
- **For mobile time recording solutions**
- **Reads EM compatible transponders**
- **Stores up to 8,192 entries**
- **Backlight display**
- **USB interface for easy integration**
- **Very compact: only 58x20x47 mm (WxDxH)**

The new Promag PCR-120 for mobile time recording or personal identification solutions – especially for guard-duty, construction sites, etc. Unlike conventional hardware that is used in fixed installation or desktop computers, the PCR-120 can be used for virtually any mobile application, such as for projects and special events. Naturally, it can also be used for industrial purposes, on construction sites or for home-office time recording – the compact, low-weight PCR-120 offers customers high mobility and flexibility.

In order to fulfil your customers' requirements with the highest degree of flexibility, we offer portable readers for various standards: It incorporates the same design used for the MSR-120 magnetic card reader with the difference that it reads RFID transponders at 125 kHz (EM technology) instead of magnetic stripe cards. An RFID reader for data collection with high frequency range is also available: The MFR-120 reads transponder serial numbers and RFID tags at 13.56 MHz using the Mifare/Felicia standard. The device is easily integrated into any application and available with either RS232 or USB interface.

Every scan is accompanied by an acoustic and visual confirmation. After each read process the transponder data is displayed on the 101x76 pixel display of the device. Use its four navigation keys to control the device, go through data entries or to delete entries. This always includes status information on the total amount of data entries, date and time. Whenever you want to transfer your collected data to the PC, a simple press of the button will suffice. You will have an overview of all data entries instantly. Consequently, you choose how to proceed after transferring the data – you either delete all old entries in the device or keep them. A large 512KB memory allows up to 8,192 entries that are processed with the supplied »Monitor« software application.

Similar to the MSR-120, the PCR-120 is password-protected against unauthorised access. Use the setup software on the provided CD to configure date, date format, time, interface and backlight of the reader.

Long operation and high reliability are provided by the use of conventional 1.5V size AAA batteries.

Specifications	Item number
• PCR-120, USB	pmpcr120u
• MFR-120, RS232	pmmfr120r
• MFR-120, USB	pmmfr120

Promag MSR-500

- **Mobile magnetic stripe reader**
- **Also suitable as a time clock**
- **Saves up to 8,000 entries**
- **RS232 interface**
- **Light weight**
- **Compact: dimensions: 105x32x58 mm (WxDxH)**

The Promag MSR-500 is used wherever magnetic cards are read in mobile applications. Its included power supply and 512 KB memory allow completely independent operation over prolonged periods of time.

The integrated memory reads up to 2,000 magnetic cards with tracks 1-2-3, up to 4,000 on two tracks and even 8,000 with only one track.

Even inexperienced staff find this device very easy to operate. Magnetic cards can be pulled at different speeds through the reading slot from both directions. The device adds a time stamp to scanned data, which is then sent to any PC with as RS232 interface. Possible applications include for instance, mobile time clocks using magnetic cards, customer and visitor management, market research and similar.

Specifications	Item number
• MSR-500 , RS232	pmmsr500

Promag MSR-120

- **Mobile magnetic stripe reader with display**
- **Saves up to 2,048 entries**
- **Reads all three tracks**
- **Backlight**
- **Easy integration through RS232 or USB**

The MSR-120 is a mobile magnetic stripe reader with integrated display. This reader is an excellent choice for mobile data collection of EC, credit and magnetic cards of all kinds.

A normal AAA battery provides power to the device, which is ready-to-use with the press of the button. To transfer the data to a PC, simply connect it using a USB or RS232 cable. MSR-120 is a password protected device – unauthorized access is not possible. Use the setup software in the included CD to configure date, date format, time, interface and backlight of the reader.

Whenever you want to transfer your collected data to the PC, a simple press of the button is enough. All data entries are displayed in order, and for every entry you will find information from three different tracks successively. Its memory can hold up to 2,048 data entries before any data has to be transferred to a computer. Every scan is accompanied by an acoustic and visual confirmation. Use the four navigation keys to control the device, scroll through data entries or delete them. After each scan, the magnetic stripe data is displayed on the device. This includes continuous status information regarding the total number of data entries, date and time.

Specifications	Item number
• MSR-120, USB	pmmsr120
• MSR-120, RS232	pmmsr120r

PROMAG™

Promag FAT800

- **Desktop network terminal for RFID data collection**
- **For EM compatible transponders**
- **High-contrast LCD display**
- **Programmable keypad**
- **Serial interface for receipt printers**
- **Ready for wall installation**
- **Very compact: only 105x55x185 mm (WxDxH)**

The Promag FAT-800 network terminal is a combination device for new areas in cashless billing systems and for integration as a safety control terminal into production processes. It reads EM compatible transponder cards. Users simply pull the 125 kHz cards through the horizontal slot at the FAT-800 head and enter an additional PIN (if required). This variable combination of card and PIN verification offers a wide range of applications and high security at the same time.

Use the terminal as a desktop device or install it on the wall. If you install the device in companies, government offices or university canteens, you can offer cashless payments of orders and direct online billing. Optional PIN verification for payments is available for all security criteria: twenty blank keys on the ergonomically designed keypad can be programmed freely using the supplied software. Your customers individually configure any positions on the keypad. The keys feature transparent caps. You easily remove the caps in order to label the keys with small printed pieces of paper.

A fast 10BaseT Ethernet interface offers network integrations of any number of terminals and consequently realises real-time data exchange. Data is transferred over TCP/IP in ASCII format. A high-contrast display shows any read data or previously configured information in 2x16 characters to the user. If required, a receipt printer can be connected to the FAT-800's serial port to provide users with a voucher.

Extensive documentation and configuration software are supplied with the FAT-800.

Specifications	Item number
• FAT-800, Ethernet	pmfat800r

RFID-Transponder and Accessories

Name	Frequency	Standard	Memory	Features	Shape	Dimensions/Thickness	PU*	Item number
• Disc Tag	125 kHz	EM4102	64bit	LF, Read Only/fixed ID	Round	Ø 50mm/2.0mm	25	tag50a
• Disc Tag	125 kHz	EM4102	64bit	LF, Read Only/fixed ID	Round	Ø 25mm/2.0mm	25	tag25b
• Disc Tag	125 kHz	EM4102	64bit	LF, Read Only/fixed ID	Round	Ø 22mm/2.0mm	25	tag22b
• Disc Tag	125 kHz	EM4150	64bit	LF, rewritable	Round	Ø 50mm/2.0mm	25	gitag1q50a
• Disc Tag	125 kHz	EM4150	64bit	LF, rewritable	Round	Ø 25mm/2.0mm	25	gitag1q25
• Disc Tag	125 kHz	EM4150	64bit	LF, rewritable	Round	Ø 22mm/2.0mm	25	gitag1q22
• Disc Tag	13.56 MHz	ISO14443-A	1kb	LF, Read Only/fixed ID	Drop-shaped	47x32mm/6.0mm	25	gitag1q62
• Transponder card	125 kHz	EM4102	64bit	LF, Read Only/fixed ID	Card	54x85mm/0.8mm	25	cfr01
• Transponder card	125 kHz	EM4102	64bit	LF, Read Only/fixed ID	Card	54x85mm/1.0mm	25	cfr03e
• Transponder card	125 kHz	EM4150	64bit	LF, rewritable	Card	54x85mm/0.8mm	25	gitag1q-01
• Transponder card	125 kHz	EM4150	64bit	LF, rewritable	Card	54x85mm/1.0mm	25	gitag1q-03
• Transponder card	13.56 MHz	ISO14443-A	1kb	Mifare, rewritable	Card	54x85mm/0.8mm	25	pmmfa01
• Transponder card	13.56 MHz	ISO14443-A	1kb	LF, Read Only/fixed ID	rectangle	27x60mm/7.7mm	25	pmmpag61
• Transponder card	13.56 MHz	ISO14443-A	1kb	LF, Read Only/fixed ID	rectangle	27x45mm/6.0mm	25	pmmtag64
• Keyring pendant	125 kHz	EM4102	64bit	LF, Read Only/fixed ID	Drop-shaped	40x25mm/6.5mm	25	tag25kb
• Keyring pendant	125 kHz	EM4150	64bit	LF, rewritable	Drop-shaped	40x25mm/6.5mm	25	gitag1q25k
• Keyring pendant	125 kHz	EM4102	64bit	LF, Read Only/fixed ID	Drop-shaped	40x25mm/6.0mm	25	tag20kb
• Keyring pendant	125 kHz	EM4150	64bit	LF, rewritable	Drop-shaped	40x25mm/6.0mm	25	gitag1q20k
• Keyring pendant	13.56 MHz	ISO14443-A	1kb	Mifare 1K, rewritable	Drop-shaped	38x34mm/6.5mm	25	pmmfa30k
• Keyring pendant	13.56 MHz	ISO14443-A	1kb	LF, Read Only/fixed ID	Drop-shaped	41x31mm/9.0mm	25	pmmtag63

Name	Description	Item number
• Cable cover	for all TR-51xx devices	pmcover

LF = Low frequency

* Packaging unit

- **Reliable Handheld scanner with laser, CMOS or CCD engine**
- **Scanners for installation and fixed mounted applications**
- **Mobile bar code terminals (DOS, Windows CE)**

The inventor of the bar code offers an extensive range of bar code scanners and MDA devices for retail, production and logistics. Their high-quality hardware is not only robust, but satisfies all demands for flexibility and performance.

- **Hand-held scanners for POS and office applications**
- **Robust scanner for industry and production**
- **Wireless scan solutions, installation and special scanners**

Motorola Symbol is the market leader in scanning and mobility solutions and is used especially by large companies worldwide. As ADC specialist, we are an official partner of Motorola and offer you all Symbol scanners always at favourable prices and directly from stock.

- **Professional laser scanner for handheld and stationary use**
- **CMOS imager and extremely fast 2D scanner**
- **Mobile data collection devices with and without Windows**

The brands Metrologic and Handheld Products have been united under the new brand »Honeywell Scanning and Mobility«. As official Honeywell distributor, we offer you the complete product line of hand scanners, installation scanners and mobile terminals.

- **Semi and fully rugged notebooks for field work, industry and construction**
- **State-of-the-art technologies, customizable and certified**
- **Extremely sturdy handheld terminals for highest demands**

For more than 20 years now, Getac has been producing and distributing highly robust PC and handheld components for the most demanding use in military, police, industrial and production equipment. Their hardware uses latest technologies and fulfils strictest security standards.

- **Reliable and fast POS printers**
- **Robust direct thermal printers for retail and warehouse**
- **Complete package including all accessories for immediate use**

With Metapace, we offer you an exclusive brand for professional POS printers and hardware. Along with the outstanding technical performance, the complete package is exceptional as it ensures immediate installation, even by beginners.

- **Receipt, multi-station or mobile printers**
- **Printers for monochrome and coloured ticket, receipt and label printing**
- **Touch screen cash register systems and customer displays**

The leader in the receipt printer market offers a vast range of POS printers, specialised printers as well as touch screen cash register systems for almost every application. Jarltech is the largest distributor of Epson POS devices in German speaking Europe.

- **POS direct thermal and dot matrix printers**
- **Label and ticket printers for desktop/midrange applications**
- **Mobile label printers for catering and field work**

Known for reliable and impressive products, Citizen has been producing printers for POS and bar code applications for many years. Clever features as well as long durability guarantee professional results in point of sale and warehouse areas.

- **Label printers for office and retail applications**
- **Industrial, midrange and portable label printers**
- **High-quality consumables for any application**

Globally, Zebra is the leading label and bar code printer manufacturer. Their unrivalled product range of compact desktop printers, industrial and midrange label printers as well as original consumables serves all major companies worldwide in logistics, production and retail.

- **Touch screen monitors in various forms and sizes**
- **Touch screen POS systems with integrated PC**
- **Special touch screen hardware for individual demands**

Jarltech is exclusive global distributor for Glancetron hardware. A particularly large range of touch screens (from 8 to 19 inch) as well as compact high-quality PC POS systems make Glancetron the perfect choice wherever durable and cost-effective POS hardware is required.

- **High-quality POS systems with integrated touch screen**
- **Innovative colour scheme with alternate frames**
- **Robust, resistant aluminium housing**

Colormetrics is a Taiwanese manufacturer of especially high quality and elegant POS systems with innovative colour schemes. The very sophisticated systems are suitable for all areas of trade and catering, and are available in many different elegant colours.

- **Touch screen monitors with a large choice of options**
- **Touch screen POS systems with integrated PC**
- **Certified touch screens for medical applications**

As the inventor of the touchscreen, Elo has a great influence on the touchscreen market and keeps developing this technology further. High quality monitors and systems with integrated PCs from Elo are renowned for their robustness and reliability.

- **Modular workstations and all-in-one POS systems**
- **Brand name peripheral devices for POS and production**
- **Global product availability with three-year warranty as standard**

HP unites excellent product quality and tremendous expertise. The group offers professional POS systems for every area at competitive conditions. Thanks to their customer-oriented service concepts, HP's safety packages are available without location restrictions.

- **Touch and complete systems from one of the oldest POS manufacturers**
- **Proven performance for banks, retail and hospitality**
- **High-quality peripherals such as printers, scanners and monitors**

With 125 years of experience, NCR is a leading provider of checkout solutions. In addition to professional hardware, this innovative group offers intelligent service concepts and on-site service, which guarantee you better margins and security.

- **Touch screen cash register systems for retail and catering**
- **Ultra-silent and reliable complete cashier stations**
- **Top hardware solutions in brilliant design**

State-of-the-art technical knowledge through years of experience and a large selection of hardware make the name brand manufacturer the right choice for your customers. Jarltech is official distributor for Panasonic touch screen POS systems in all of Europe.

- **Cash register keyboards for various applications**
- **Programmable PC keyboards with alternative layouts**
- **Professional LCD monitors with integrated touch screen**

Preh Key Tec is one of the major manufacturers of cash register and special-purpose keyboards for various applications. Preh Key Tec produces keyboards with different amounts of keys that have been used for decades in retail and production.

- **Waiter locks for automatic identification**
- **Key readers for industrial applications**
- **Keys in diverse trendy colours**

Addimat produces and sells professional complete catering and bar service systems. The Addimat waiter and pin locks offered by Jarltech are popular with personnel and management alike for their security, simple operation and robustness.

- **Smart card readers / writers for various standards**
- **Offline and online time recording systems with professional software**
- **Electronic signature applications and security software**

SCM is known as the inventor of the PCMCIA standard and offers a large product range related to smart cards, time recording and contactless data collection. SCM's market leading position has become even stronger since the acquisition of Towitoko.

- **RFID readers and writer / modules for installation**
- **Professional devices for time recording and access control**
- **Extensive range of RFID transponders and accessories**

Promag offers a huge range of devices that read and process RFID tags and labels together with time recording and access control systems. For you, Jarltech offers Promag installation modules, portable readers and tags in various shapes and formats.

- **Cash drawers of excellent quality and design**
- **Hinged-lid and desk-mounted drawers, top or front opening**
- **Special-purpose drawers and individual production**

Mogler is one of the most recognised manufacturers of high-quality cash drawers. Mogler products offer a sophisticated design that satisfies even the highest demands – a fact that lead many large and professional retailers to use cash drawers from Mogler.

- **High quality cash drawers made of robust materials**
- **Different product series for diverse application areas**
- **Sophisticated ergonomics and customer-specific solutions**

With more than 10,000 different products, Cash Bases offers the world's largest assortment of professional cash drawers. At Jarltech, you get a large selection of robust cash drawers and flip-lid drawers, but also individual solutions for your application.

- **Bank note testing devices for the POS**
- **Bank note counting machines for commerce and banks**
- **Professional change sorting and counting devices**

The certified ratiotec devices provide additional security and higher efficiency in retail. At Jarltech, you get all of the German brand manufacturer's testing, counting and sorting machines for change and notes of different currencies directly from stock.

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JARLTECH INSIGHTS

Jarltech Success Story – a Growing Company with a Groundbreaking Concept

Jarltech – what started out more than 15 years ago has developed into one of the largest European specialist distributors for POS and Auto-ID systems. The company has continually grown, without losing sight of its long-term and future-oriented focus on its customers' needs.

Today, Jarltech offers a broad product range encompassing multiple brand manufacturers. Additionally, well-engineered services tailored to the reseller's requirements strengthen its partners' positions in the market.

With the company's growth come additional location and personnel requirements. The expanded product line-up as well as the huge stock demand increasingly more space, which the annex and the purchase of additional warehouses remedied. Jarltech has more than 3,000 m² of storage space.

For further information on the company, products and service offerings, visit our website at **www.jarltech.com.**

JARLTECH
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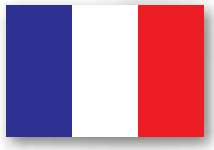

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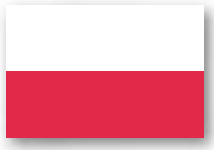

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